

REMARKS

Claims 1-4, 8, 9, 11 and 12 are currently active.

Claims 1 and 11 have been amended.

Claims 5-7 and 10 have been canceled.

Sequence Rule Non-Compliance

The sequences referred to by the Examiner are artificial pedagogical examples that reflect the underlying mathematics and biochemistry of the invention. They do not refer to any actual biological DNA sequence found in a living organism. These mathematical and chemical sequence descriptions are hypothetical, not actual biological DNA sequences, and are entirely devoid of any meaning as biological DNA sequences.

The specification has been amended to write out the names of the component nucleotides in the "fabricated" nucleotide sequence illustrative examples, so as to be in compliance with the nucleotide sequence rules.

Prior Art

Claims 1-4, 8, 9 and 11 were rejected by Examiner under 35 U.S.C. 102(b) and (e)(2) as being anticipated by Ruano.

Examiner described how Ruano discloses a method of sequencing a nucleic acid on an array that includes the step of "size separation of the products ... via electrophoretic methodology on sequencing gels. The detection of the total amount of label in said products occurs via autoradiography ... The darkness of each band in each lane corresponds to the amount of terminating nucleotide which has been incorporated into labeled product"

Applicant's invention, as amended, is distinguished from this prior art in Step (c) of amended claims 1 and 11 by "detecting a total amount of label present in the collection to produce a measurement that does not directly correspond to a length of a labeled nucleic acid product." The "bands" of the prior art electrophoretic methodology establish a direct correspondence between a labeled nucleic acid product and its length. The instant invention, as amended, is distinguished from this prior art in that there is no such direct correspondence. Therefore, the invention, as amended, is distinguished from the cited prior art.

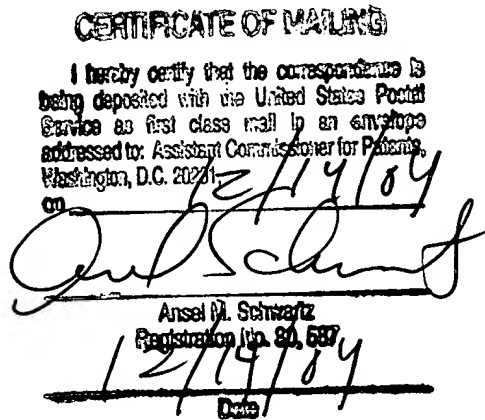
Claims 1-4, 8, 9, 11 and 12 were rejected by Examiner under 35 U.S.C. 103(a) as being unpatentable over Ruano taken in view of Lander et al.

To Ruano's amplification and sequencing steps, Lander et al. add the improvement of automation involving thermocyclers and computer analysis. However, as discussed above, the referenced prior art necessarily includes the step of "size separation of the products ... via electrophoretic methodology on sequencing gels."

Applicant's invention, as amended, is distinguished from this prior art in Step (c) of amended claims 1 and 11 by "detecting a total amount of label present in the collection to produce a measurement that does not directly correspond to a length of a labeled nucleic acid product." The "bands" of the prior art electrophoretic methodology establish a direct correspondence between a labeled nucleic acid product and its length. The instant invention, as amended, is distinguished from this prior art in that there is no such direct correspondence between a detected label and a length of the labeled DNA nucleic acid product. Therefore, the invention, as amended, is distinguished from the prior art.

Applicant respectfully submits that the invention as amended fully addresses and adequately overcomes examiner's objections, and requests that the claims now be allowed.

In view of the foregoing amendments and remarks, it is respectfully requested that the outstanding rejections and objections to this application be reconsidered and withdrawn, and Claims 1-4, 8, 9, 11 and 12, now in this application be allowed



Respectfully submitted,

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